WHAT IS CLAIMED IS:

1. An apparatus comprising:

a vent hood, including an exit flue duct, the vent hood sized and shaped to fit snugly about at least one first radiant heater to receive hot gas from near the radiant heater and to guide the received hot gas within the vent hood toward the exit flue duct.

2. The apparatus of claim **1**, in which the vent hood is sized and shaped to leave a top portion of the first radiant heater at least partially exposed.

3. The apparatus of claim **1**, in which the vent hood includes at least one louver that permits cooling air to enter the vent hood without permitting substantially any of the hot gas within the vent hood to escape through the at least one louver.

4. The apparatus of claim **1**, in which the vent hood is sized and shaped to be installed by dropping it over or about the first radiant heater when the first radiant heater is hung from a ceiling.

5. The apparatus of claim **1**, in which the vent hood includes inclined side panels configured to be positioned on opposing sides of the first radiant heater in close proximity to the first radiant heater.

6. The apparatus of claim **2**, further including a manifold configured to receive hot gasses from near the first radiant heater, and in which the hot gas is guided by the inclined side panels toward the manifold.

7. The apparatus of claim **1**, further including the first radiant heater.

8. The apparatus of claim **7**, in which the first radiant heater is a fuel-powered radiant heater that produces a combustion byproduct.

9. The apparatus of claim **7**, in which the first radiant heater is an electric-powered radiant heater that results in hot air convection.

10. The apparatus of claim **7**, further including at least one second radiant heater that receives and is heated by the hot gas and that radiates additional heat.

11. The apparatus of claim **10**, in which the second radiant heater includes a tube-shaped radiant element.

12. The apparatus of claim **11**, in which the second radiant heater includes a backside reflector near the tube-shaped radiant element.

13. The apparatus of claim **11**, in which the tube shaped element is arranged in a spiral about the first radiant heater.

14. The apparatus of claim **1**, further including a heat exchanger to extract heat from the hot gas.

15. The apparatus of claim **1**, further including a vacuum pump that is operatively coupled to the exit flue duct to help pull gas through the exit flue duct.

16. The apparatus of claim **1**, further including an intake air duct, at least a portion of which is positioned to receive heat from the hot gas and to pre-heat intake air delivered to a plenum chamber.

17. The apparatus of claim 16, in which the portion of the intake air duct is located in or near the vent hood.

18. The apparatus of claim **16**, in which the portion of the intake air duct is located in or near the exhaust duct.

19. A method comprising:

producing radiant heat, in which the producing radiant heat also results in hot gasses near a first radiant energy source;

collecting the hot gasses using a collection structure; and

guiding the collected hot gasses toward an exhaust duct.

20. The method of claim **19**, further including introducing cooling air into the collection structure without permitting the hot gasses to escape the collection structure.

21. The method of claim **19**, further including:

heating a first radiant energy source using the hot gasses; and

producing additional radiant heat using the second radiant energy source.

22. The method of claim **19**, further including extracting heat from the hot gasses.

23. The method of claim **22**, further including using the extracted heat to pre-heat intake air to a combustion source.

24. An apparatus comprising:

a first radiant heating element that, in operation, produces radiant heat and also produces hot air that moves in a convection current; and

a second radiant heating element that is positioned with respect to the first radiant heating element such that the second radiant heating element is heated by the

convection current of the hot air from the first radiant heating element to produce additional radiant heat.

25. The apparatus of claim **24**, in which the second radiant heating element includes a panel that includes at least one feature that includes a first side that is oriented toward the primary radiant heating element and a second side that is oriented away from the primary radiant heating element.

26. The apparatus of claim **25**, in which the first side is more reflective than the second side.

27. The apparatus of claim **26**, in which the second side includes an emissivity that radiates more heat than the first side.

28. The apparatus of claim **25**, in which the at least one feature is selected from the group consisting of at least one of a ridge, a fin, a furrow, a flute, a strip, a weir, a duct, and a ripple.

29. The apparatus of claim **25**, in which the at least one feature includes at least one opening sized to pass hot gas through.

30. The apparatus of claim **24**, in which the second radiant heating element includes a serpentine arrangement of features.

31. A method comprising:

producing radiant heat using a first radiant energy source;

positioning a second radiant energy source near the first radiant energy source to receive radiant heat from the first radiant energy source; and

providing additional radiant heat from the second radiant energy source.

32. The method of claim 31, in which the positioning the second radiant energy source includes blocking substantially all the radiant heat from the first radiant energy source.

33. The method of claim 31, in which the positioning the second radiant energy source includes using a second radiant energy source of a substantially different shape than the first radiant energy source to obtain a desired effective shape from which radiant heat is provided to a desired environment.

34. The method of claim 31, in which the positioning the second radiant energy source includes positioning to reflect radiant energy back toward the first radiant energy source.

35. The method of claim 31, in which the positioning the second radiant energy source includes using a staged structure for receiving hot air convectively transported from the first radiant energy source, the stage structure including segments operating at different temperatures from each other.

36. An apparatus comprising:

a first radiant heating element that, in operation, produces radiant heat; and

a second radiant heating element that is positioned with respect to the first radiant heating element such that the second radiant heating element is heated by the radiant heat from the first radiant heating element to produce additional radiant heat.

37. The apparatus of claim 36, in which the second radiant heating element is positioned with respect to the first radiant heating element such that substantially all of the radiant heat from the first radiant heating element is blocked by the second radiant heating element while still leaving an exhaust path for hot air from the first radiant heating element.

38. The apparatus of claim **36**, in which the first radiant heating element is different in shape from the second radiant heating element such that the second radiant heating element provides a modified effective shape from which energy is radiated.

39. The apparatus of claim **36**, in which the first radiant heating element includes a plurality of radiating segments, and in which the second radiant heating element includes a unitary radiating segment.

40. An apparatus comprising:

a first radiant heating element that, in operation, produces radiant heat at a face of the first radiant heating element and also produces hot air that moves in a convection current; and

an airflow inhibitor, positioned near the face of the first radiant heating element, to inhibit movement of the hot air.

41. The apparatus of claim **40**, in which the airflow inhibitor includes an arrangement of cell-like structures that inhibit convective airflow near the face of the first radiant heating element.

42. The apparatus of claim **40**, in which the airflow inhibitor includes a plurality of filaments attached to or near the face of the first radiant heating element to inhibit convective airflow near the face of the first radiant heating element.

43. The apparatus of claim **40**, in which the airflow inhibitor includes a material near the face of the first radiant heating element, and in which the material is substantially transparent to the radiant heat generated by the first radiant heating element.

44. The apparatus of claim **40**, in which the airflow inhibitor includes a body of fibers near the face of the first radiant heating element to inhibit convective airflow near the face of the first radiant heating element.

45. The apparatus of claim **40**, in which the airflow inhibitor includes a wire mesh near the face of the first radiant heating element to inhibit convective airflow near the face of the first radiant heating element.

46. A method comprising:

producing radiant heat at a first radiant energy source; and

inhibiting convective airflow near the first radiant energy source by placing an airflow inhibiting structure in a path of the radiant heat.

47. The method of claim **46**, in which the structure passes a substantial amount of the radiant heat from the first radiant energy source.

48. The method of claim **46**, in which the structure absorbs a substantial amount of the radiant heat from the first energy source and re-radiates radiant heat as a second radiant energy source.